REMARKS

The claims are 1-8. Claims 1-3 have been withdrawn in response to a restriction requirement.

The specification on page 5 has been amended in accordance with the Examiner's requirement. The claims have also been amended to overcome the Examiner's objections.

Claims 4-6 and 8 have been rejected under 35 USC 102(b) as anticipated by Piloto et al. Claim 4 has been replaced with claim 9.

Piloto et al disclose a green tape stack that is aligned and laminated, is then plated with a conductive layer, and the stack and conductive layer co-fired. The number and size of the green tape layers is chosen so as to resonate at a given frequency. The resonators are defined by their dimensions and by plated conductive layers on the top, bottom and sidewalls. The resultant structure can be laminated and co-fired with additional green tapes having electrical components embedded in or mounted thereon.

Piloto et al do not support the green tape stacks on a metal support substrate, as claimed by applicant. The metal support substrate adds mechanical strength to the structure; provides a

conductive plane; and prevents shrinkage of the green tapes in the x and y dimensions, all at the same time. A second conductor layer is applied over the first green tape stack, and the second green tape stack is mounted over the second conductive layer. This is a different structure than Piloto et al who do not suggest or disclose the metal support substrate at all. Piloto et al have to make changes in the dimensions of their structures to allow for a substantial shrinkage, which does not occur with the present structure. Further, see col 5 lines 55-59, because of this shrinkage, trimming of the fired structure is also required, adding extra steps and costs to the waveguide filters. Thus applicants submit the present claims are not anticipated by Piloto et al.

Claim 7 has been rejected as unpatentable over Piloto et al in view of Kubota et al. This rejection is respectfully traversed.

Claim 7, dependent upon claim 4, requires a metal support substrate, not shown in the references. The advantage of such a conductor is that it provides mechanical strength to the fired green tapes as well as a conductive layer. While it may be obvious to use a probe and connector as shown by Kubota et al to

couple the cavities to an input/output source, claim 7 is dependent upon claim 9 and thus includes all of the limitations of claim 9, including the metal support substrate, and two green tape stacks.

Applicants have made a sincere effort to amend the language of the specification and claims to satisfy the Examiner and overcome the prior art. However, if the Examiner believes a telephone interview would advance the prosecution of this application, he/she is invited to contact the undersigned.

A clean copy of the claims as added or amended are set forth on the following page.

OIPE JC174
JUN 0 4 2001
PATENT & TRADEMARK OFFICE

Docket No. SAR 12428

A Petition for a One month Extension of the term for response is attached. The Petition fee is charged to Deposit Account 13-4542.

Respectfully submitted,

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The undersigned certifies that this correspondence is being deposited as first class mail with the United States Postal Service in an envelope addressed to the Assistant Commissioner for Patents, Washington, DC 20231 on

May 29, 2001

William R. Morris
Name of person making deposit

_____
Signature

plurality of dielectric filled waveguide resonators having dimensions defined by conductors on the top, bottom and sidewalls. These volumes can have various sizes and shapes, depending on the operating frequency and resonant mode desired. The cavities are coupled together by means of apertures formed in the interior walls. The position and size of these apertures can also be adjusted depending on the degree of coupling desired.

Fig. 1 illustrates an embedded RF filter that can be made according to the present invention. Fig. 2 is a cross sectional view thereof.

Referring to Figs. 1 and 2, metal support or ground plane 10 has a first green tape stack 12 mounted thereon having a surface 13. This green tape stack 12 is punched to provide openings for [conductive] CAVITY walls 18 and coupling apertures 19 forming cavities [16] 15 and openings 14 for insertion therein of E-plane probes 22. The cavity walls 18 and coupling apertures 19 are printed with a metal conductor ink to make the walls and openings 18, 19 of the cavities conductive. A conductive layer 20 can be printed over the first green tape stack 12 to form a second ground plane.

A second green tape or green tape stack 23 (Fig. 2) is mounted over the ground plane 20. Alternatively, the bottom surface of the second green tape or green tape stack 23 is screen printed with a conductive layer to form the second ground plane 20. Openings 14 are punched therein to provide for insertion of E-plane probes 22. A microstrip transmission

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